

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000858**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0820**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Bikepath Assembly BK004A5
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: QA found 2 missed UT indications after ZPMC had tested and accepted these weld in bikepath assembly BK004A5

Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on the Bike Path, these QA Inspectors discovered the following issues:

- Two (2) Class "A" indications measuring approximately 25-30mm in length.
- The welds are Complete Joint Penetration butt joints joining the stiffener to stiffener.

-The indication details are given as below:

1. The Indication rating is +3dB and length approximately 25mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 6mm.

The indication is located on the weld joint identified as BK004A5-001-112.

The "Y" location for this indication is approximately 50mm from top edge of the stiffener.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

2. The Indication rating is +8dB and length approximately 30mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 8mm.

The indication is located on the weld joint identified as BK004A5-008-122

The "Y" location for this indication approximately 50mm from deck plate.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

-The indications are clearly marked by the QA Inspectors near the weld.

- The OBG Bike Paths are located in the inside of fabrication bay 19.

The Notice of Witness Inspection Number (NWIT) is 006908. The indications are located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication as having a db rating of +10 and lower for weld thicknesses 8mm through 20mm."

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

Who discovered the problem: Vibin Kumar S. and Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jan

Time and method of notification: 1500 hours, 10/10/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo, Ching Chao

Time and method of notification: 1500 hours, 10/11/10, Email

QC Inspector's Name: Xu Tao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
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Reviewed By:	Wahbeh, Mazen	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge

333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	Date:	12-Oct-2010
Dear:	Mr. Charles Kanapicki	Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Job Name:	SAS Superstructure
Subject:	NCR No. ZPMC-0820	Document No:	05.03.06-000815
Reference Description:	QA found 2 missed UT indications after ZPMC had tested and accepted these weld in bikepath assembly BK004A5		

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: Bike Path **Lift:**

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on the Bike Path, Caltrans QA Inspectors discovered the following issues:

- Two (2) Class "A" indications measuring approximately 25-30mm in length.
- The welds are Complete Joint Penetration butt joints joining the stiffener to stiffener.
- The indication details are given as below:
 1. The Indication rating is +3dB and length approximately 25mm.
The nominal thickness of the plate is 10mm and depth of the indication approximately 6mm.
The indication is located on the weld joint identified as BK004A5-001-112.
The "Y" location for this indication is approximately 50mm from top edge of the stiffener.
The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).
 2. The Indication rating is +8dB and length approximately 30mm.
The nominal thickness of the plate is 10mm and depth of the indication approximately 8mm.
The indication is located on the weld joint identified as BK004A5-008-122
The "Y" location for this indication approximately 50mm from deck plate.
The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).
- The indications are clearly marked by the QA Inspectors near the weld.
- The OBG Bike Paths are located in the inside of fabrication bay 19.

The Notice of Witness Inspection Number (NWIT) is 006908. The indications are located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Action Required and/or Action Taken:

Propose a resolution for this identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

NCT

(Continued Page 2 of 2)

Transmitted by: Laraine Woo Transportation Engineer

Attachments: ZPMC-0820

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000815

Subject: NCR No. ZPMC-0820

Dated: 28-Oct-2010

Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9

Job Name: SAS Superstructure

Document No.: ABF-NPR-000819 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ABFJV has noted which inspector was responsible for the missed indication and is monitoring his performance as well as all inspector performance.

"Please see ZPMC's comments. In addition to the repairs and NDT performed, ABFJV has noted which inspector was responsible for the missed indication and is monitoring his performance as well as all inspector performance, if he continues to miss indications disciplinary action will be undertaken. Based on these actions, ZPMC requests closure of this NCR."

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000819R00;

Caltrans' comments:

Status: CLO

Date: 31-Oct-2010

Contractor repaired and provided acceptable NDT records to close the issues. The proposed resolution is acceptable. This NCR is closed.

Submitted by: Woo, Laraine

Attachment(s):

Date: 31-Oct-2010



No. B-920

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-10-27

REGARDING: NCR-000840(ZPMC-0802)NCR-000847(ZPMC-0809)

NCR-000849(ZPMC-0811)NCR-000858(ZPMC-0820)

NCR-000861(ZPMC-0823)NCR-000862(ZPMC-0824)

NCR-000866(ZPMC-0828)NCR-000868(ZPMC-0830)

NCR-000869(ZPMC-0831)

ZPMC-0802

These welds were designated to be PJP welds and no UT is required. The NWIT were submitted due to the internal fault between the floor QC & NDT operator of ZPMC. ZPMC is providing the MT records to show the acceptance of these welds and is requesting closure of this NCR.

ZPMC-0809

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0811

ZPMC acknowledged the indications were missed and has issued an internal NCR to address this problem. ZPMC has repaired the indications and is providing the NDT records to show the acceptance of the welds. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0820

ZPMC acknowledged the indications were missed and has issued an internal NCR to address this problem. ZPMC has repaired the indications and is providing the NDT records to show the acceptance of the welds. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0823

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0824

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0828

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0830

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ZPMC-0831

ZPMC acknowledged the indication was missed and has issued an internal NCR to address this problem. ZPMC has repaired the indication and is providing the NDT record to show the acceptance of this weld. Based on this, ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000840(ZPMC-0802)

B787-MT-28327

NCR-000847(ZPMC-0809)

B787-MT-28711 R1

NCR-000849(ZPMC-0811)

B787-MT-30018 R1

B787-MT-28314 R1

NCR-000858(ZPMC-0820)

B787-UT-16620 R1

B787-UT-16622 R1

NCR-000861(ZPMC-0823)

B787-MT-11297 R1

NCR-000862(ZPMC-0824)

T787-UT-3371 R1

NCR-000866(ZPMC-0828)

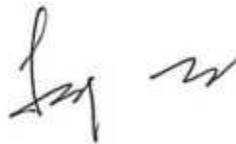
B787-UT-16173 R1

NCR-000868(ZPMC-0830)

B787-UT-17146 R1

NCR-000869(ZPMC-0831)

B787-UT-16232 R1



12/27/2010

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 (707) 649-5493

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, China

Report No: NCR-000840

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 16-Sep-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0802

Type of problem:

Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Segment 13BE and 13CEProcedural Procedural Description: Missed UT indications

Reference Description: QA found UT indications on Segment 13 LD after ZPMC had tested and accepted the welds

Description of Non-Conformance:

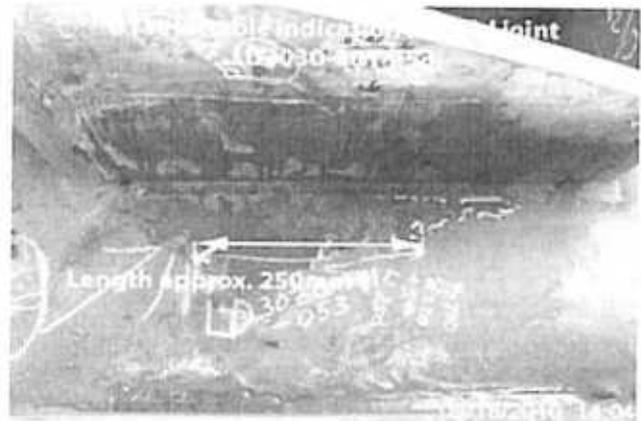
During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 13BE and 13CE, this QA Inspector discovered the following issues:

- Three (3) longitudinal linear class "A" rejectable indications measuring approximately 180mm~260mm in length.
- The welds are identified as LD3028-001-031, LD3027-001-026 and LD3030-001-053.
- Material thickness for all joints is 30mm.
- The indication db rating for joint LD3028-001-031 is a +6.
- The indication db rating for joint LD3027-001-026 is a +4.
- The indication db rating for joint LD3030-001-053 is a +5.
- The depth of the indications are from 20mm~23mm deep.
- The Weld LD3028-001-031 is joining longitudinal diaphragm (X3682A) to lifting Lug.
- The Weld LD3027-001-026 is joining longitudinal diaphragm (X3684B) to lifting Lug.
- The Weld LD3030-001-053 is joining longitudinal diaphragm (X3685A) to lifting Lug.
- All Welds are Complete Joint Penetration (CJP) "T" joint.
- All welds are Seismic Performance Critical Members (SPCM).
- The Y distance for joint LD3028-001-031 is 110mm from bottom cope hole.
- The Y distance for joint LD3027-001-026 is 40mm from bottom cope hole.
- The Y distance for joint LD3030-001-053 is 700mm from bottom cope hole.
- The indications are clearly marked on or near the weld.
- All components are located in fabrication Bay#3.

The Notice of Witness Inspection (NWIT) No. is 006680. The indications all joints are located within an area previously tested and accepted by ZPMC Quality Control (QC) personnel.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6; Table 6.3 specifies a class "A" indication as having a rating of 8d and under for material thicknesses 21mm through 38mm.

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Chen Jiuei

Time and method of notification: 1330 hours, 09-16-10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 1500 hours, 09-18-10, Verbal

QC Inspector's Name: Lay Tao

Was QC Inspector aware of the problem: Yes No

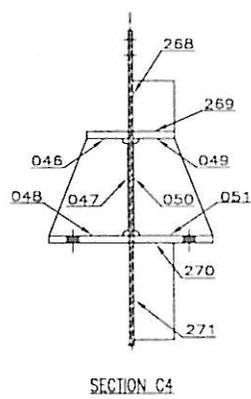
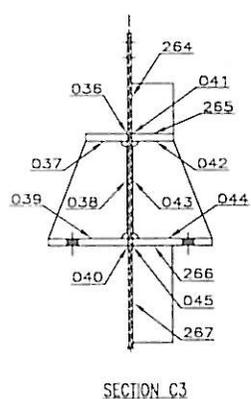
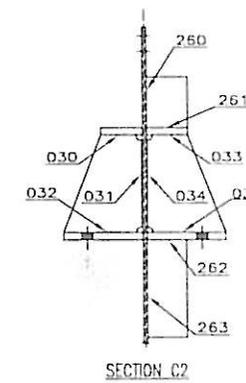
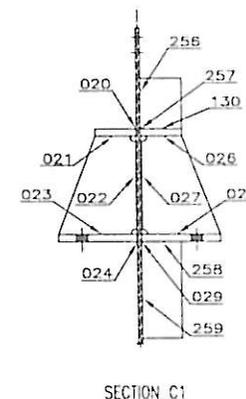
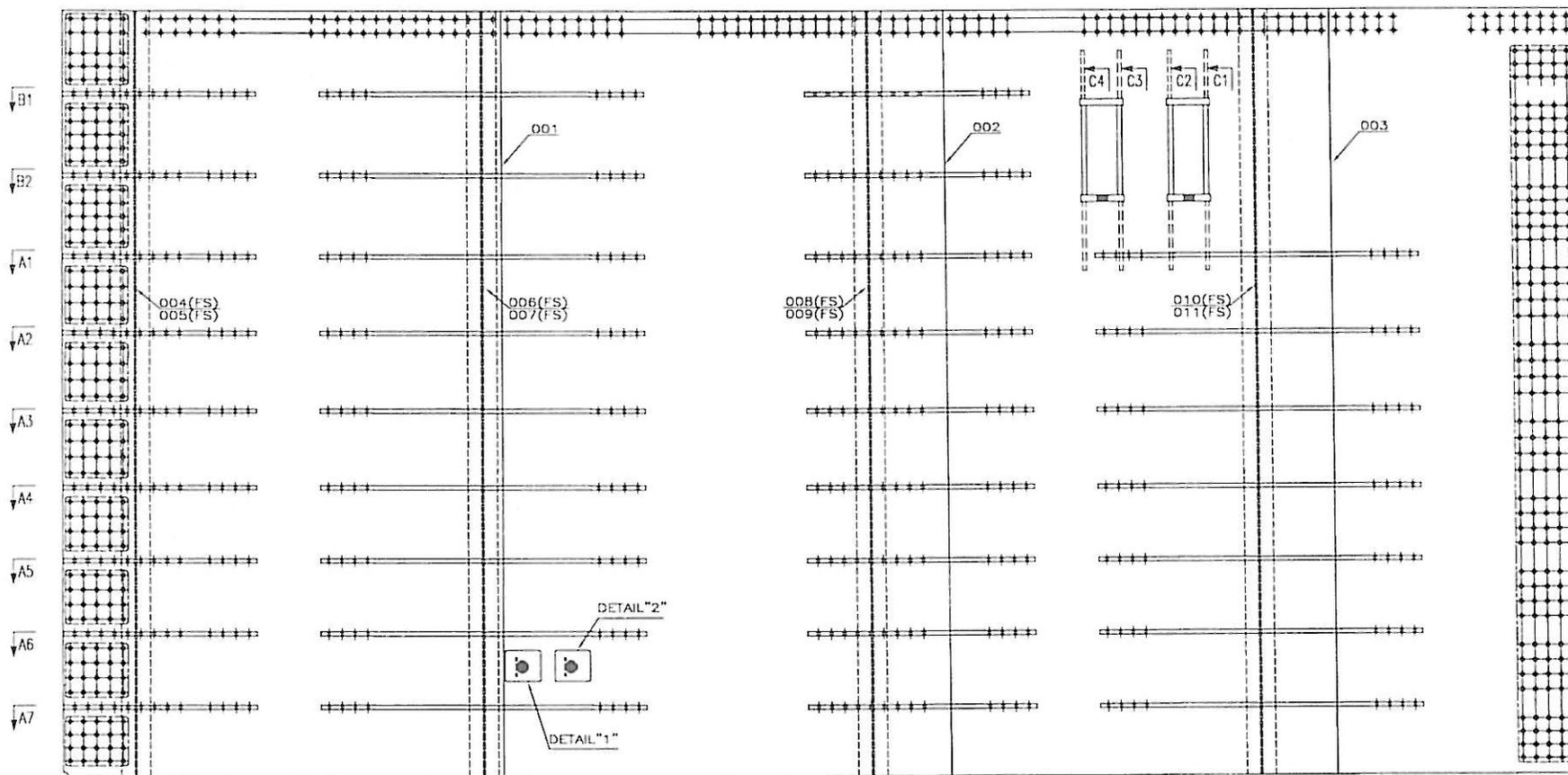
Contractor's proposal to correct the problem:

N/A

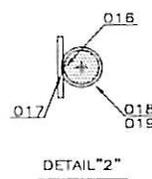
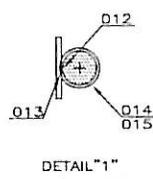
Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR



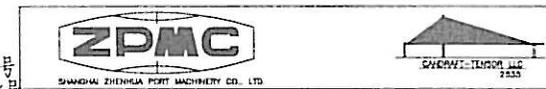
LONGITUDINAL DIAPHRAGM SUB-ASSY ~ MARK LD3028A
(TYPE 2) (E3, LOOKING NORTH - DEVELOPED)



焊缝编号说明: LD000 000 000

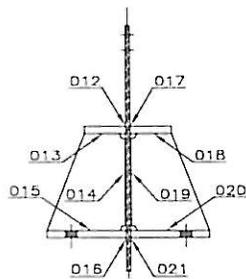
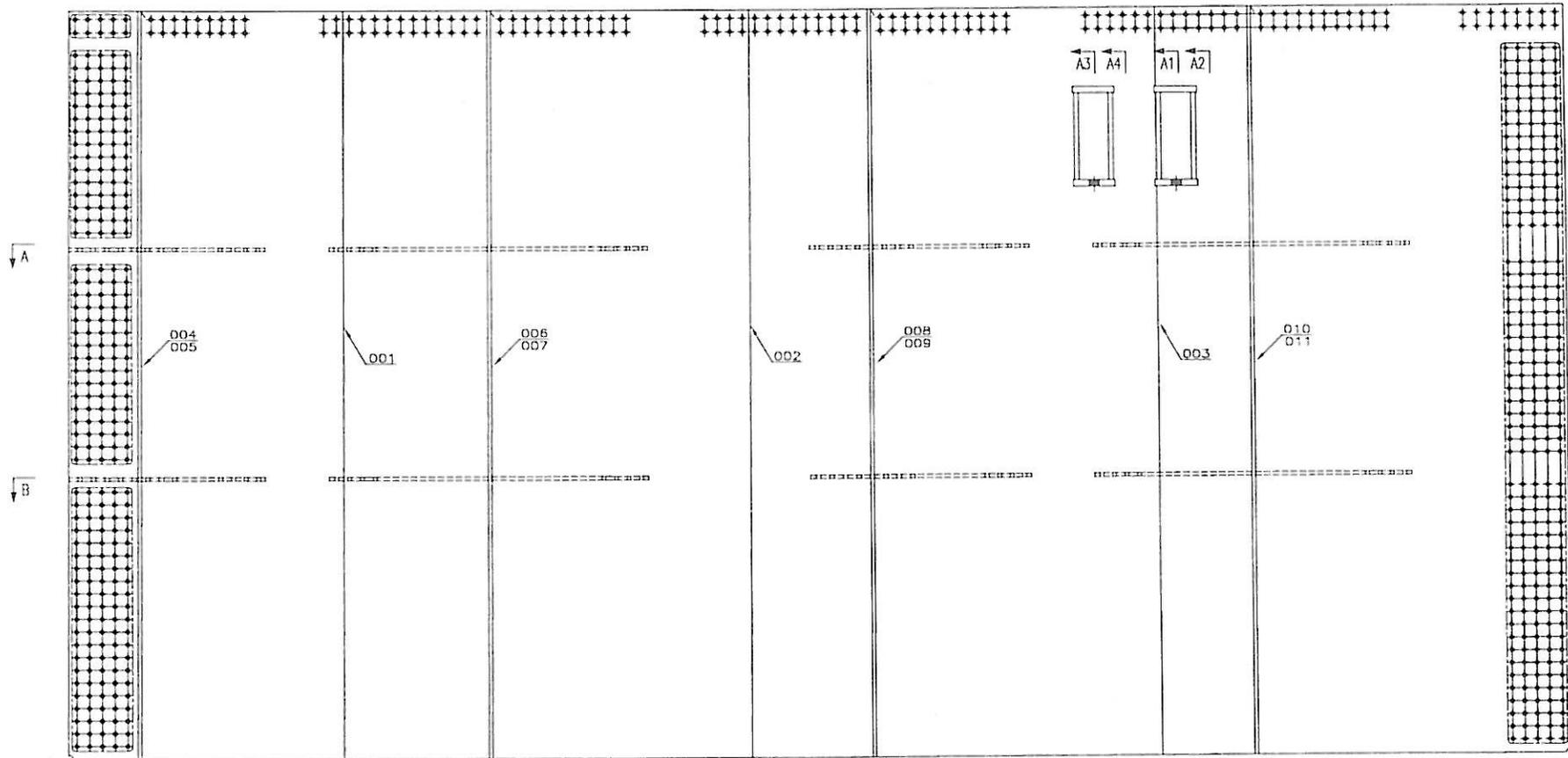
焊缝序号
部件生产流水号
部件车间图纸号

注意: 如有遗漏或重复的标注焊缝, 请QC人员通知工艺
进行补标或删减

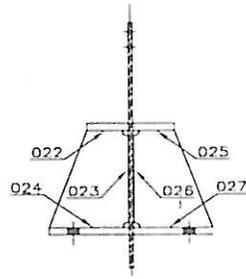


WELDING MAP		PAGINATION	
DRAWN	SHOP DRAWING NO.	1 / 3	
CHECKED	LD3028		

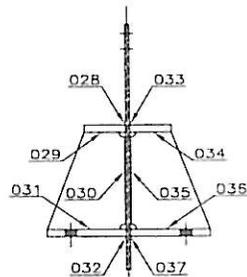
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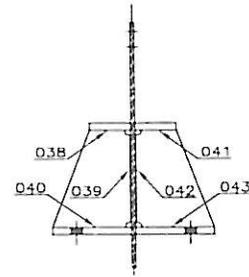
SECTION A1



SECTION A2



SECTION A3



SECTION A4

焊缝编号说明: FB000 000 000

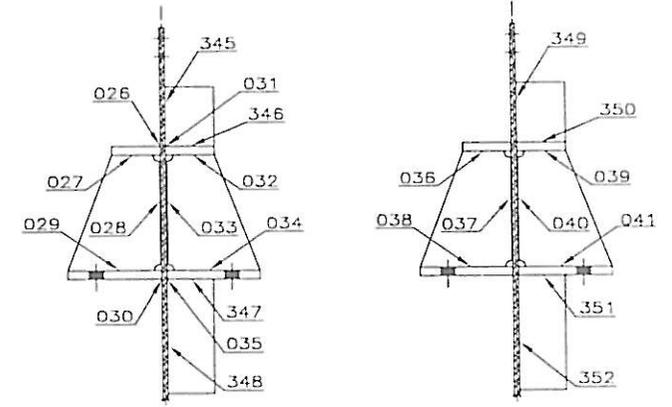
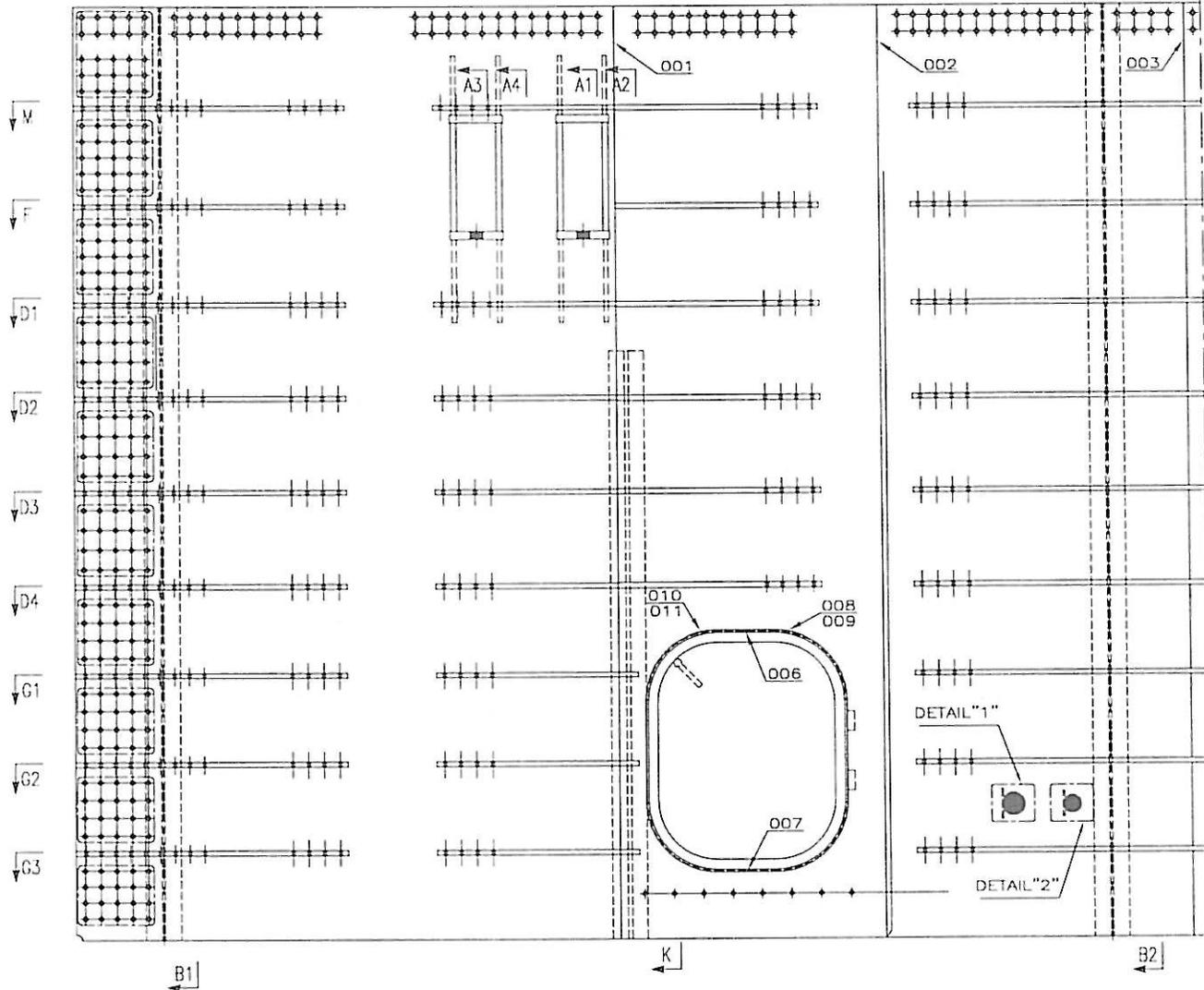
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 部件生产流水号
 部件车间图纸号

注意: 如有遗漏或重复的标注焊缝, 请QC人员通知工艺进行补标或删除

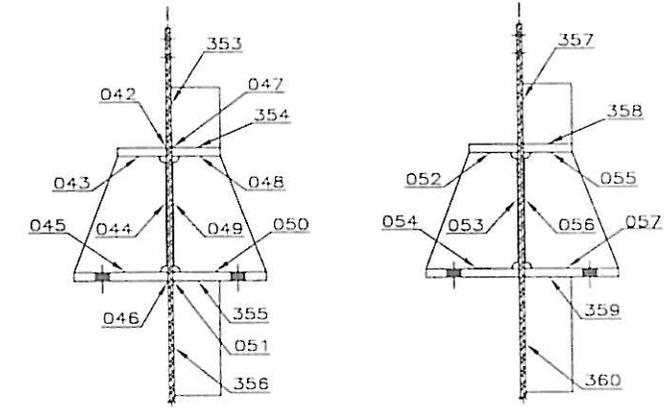
ZPMC SHANGHAI ZHITIKA PORT MACHINERY CO., LTD.		 SHANGHAI ZHITIKA PORT MACHINERY CO., LTD.
WELDING MAP		
DRAWN 2010.9.15	SHOP DRAWING NO. D3027	PAGINATION 1/2

2010.9.15

WELDLINE
FOR CONTINUATION
SEE SHEET LD3030A

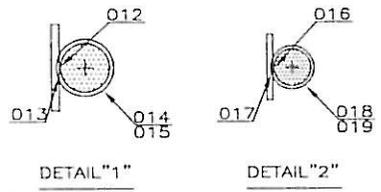


SECTION A1 SECTION A2



SECTION A3 SECTION A4

LONGITUDINAL DIAPHRAGM SUB-ASSY ~ MARK LD3030A
(TYPE 2) (Ø E3, LOOKING NORTH - DEVELOPED)



焊缝编号说明: LD000 000 000

LD000 000 000
 焊缝序号
 部件生产流水号
 部件车间图纸号

注意: 如有遗漏或重复的标注焊缝, 请QC人员通知工艺
进行补标或删减

ZPMC SHANGHAI ZHENHEA PORT MACHINERY CO., LTD.		
WELDING MAP		
DRAWN CHECKED	SHOP DRAWING NO. LD3030	FOLDINATION 1/4

Handwritten signature and date: 2010.9.15



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-28327		DATE日期 2010.10.16		PAGE OF页码 1/1		Revision No: 0	
PROJECT NO. 工程编号: ZP06-787			CONTRACTOR: 用户: CALTRANS				
DRAWING NO. 图号: LD3028/3027/3030 LONGITUDINAL DIAPHRAGM			CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4				
REFERENCING CODE 参考规范编码: AWS D1.5-2002		ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002		PROCEDURE NO. 程序编号: ZPQC-MT-01		CALIBRATION DUE DATE 仪器校正有效期: Dec. 28 ST , 2010	
EQUIPMENT 设备: MT YOKE		MANUFACTURER 制造商: PARKER		MODEL NO. 样式编号: DA-400S		SERIAL NO. 连续编号: 17372	
MAGNETIZING METHOD 磁化方法		Continuous magnetic yoke 磁轭式连续法		CURRENT 电流		AC	
PARTICLE TYPE 磁粉类型		Dry magnet powder 干磁粉		YOKE SPACING 磁轭间距		70~150mm	
MATERIAL TO BE EXAMINED 检测材料		<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造		Material & thickness 母材,厚度		A709M-345T2 25mm	
WELDING PROCESS 焊接方法		FCAW		TYPE OF JOINT 焊缝类型		T-JOINT	

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
LD3028-001-031				ACC.		100%MT
LD3027-001-026				ACC.		100%MT
LD3030-001-053				ACC.		100%MT
BLANK						

EXAMINED BY主探 Wang Wei <u>Wang Wei</u>		REVIEWED BY审核 <u>Xu Hai</u>	
LEVEL - II SIGN 签名 / DATE日期 2010.10.16		LEVEL-II SIGN / DATE日期 2010.10.16	
质量经理 / QCM <u>Lu Jianhua</u>		用户CUSTOMER	
签字 SIGN / 日期 DATE 2010.10.16		签字 SIGN / 日期 DATE	

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000847

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 23-Sep-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0809

Type of problem:

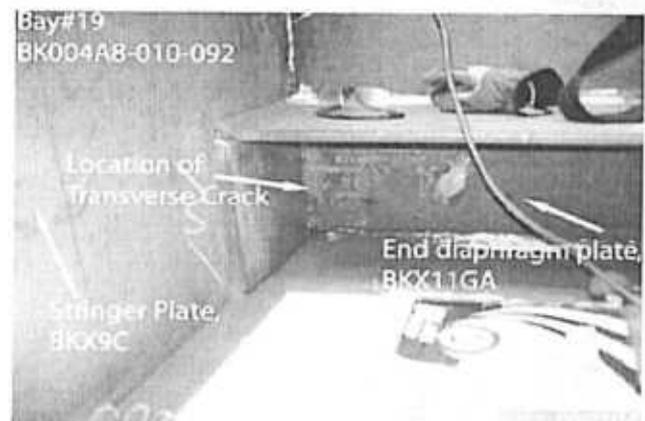
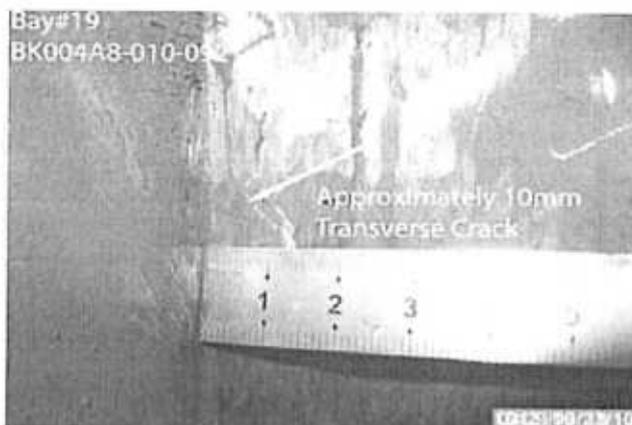
Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Bikepath BK004A-010Procedural Procedural Description: Missed MT Indication by QC

Reference Description: QA found a missed MT transverse crack after ZPMC had tested and accepted the weld in the Bikepath

Description of Non-Conformance:

During the Quality Assurance (QA) Magnetic particle Testing (MT) review of welds located on OBG Bike path BK004A-010, this QA Inspector discovered the following issue:

- One transverse crack that measured approximately 10mm in length.
- The weld is identified as BK004A8-010-092.
- The weld is a Partial joint penetration (PJP) T joint, joining the Stringer plate (BKX9C) to the End diaphragm plate (BKX11GA).
- The Y Location is 100mm from the bearing plate.
- The OBG Bike path is located in BAY#19.
- This crack is clearly marked on the material on/near the weld.
- This weld joint is designated as Non-Seismic performance critical (Non-SPCM) weld member.
- The Notice of Witness Inspection Number (NWIT) is 006731.
- The crack is located within the area that has been re-tested and accepted by ZPMC Quality Control (QC) subsequent to the heat straightening procedure.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Applicable reference: Special Provisions Section 8.3 – "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 (02) Section 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Chandra Sudalaimuthu

Name of individual from Contractor notified: Peng Wen Jun

Time and method of notification: 1100 hours, 09/23/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 0800 hours, 09/24/10, Verbal

QC Inspector's Name: Xu Tao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000849

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 25-Sep-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0811

Type of problem:

Welding Concrete Other

Welding Curing Procedural **Bridge No:** 34-0006

Joint fit-up Coating Other **Component:** Bikepath Assembly BK004A6-008 and BK004A3-01

Procedural Procedural **Description:** Missed MT cracks by QC

Reference Description: QA found a missed MT transverse crack and MT longitudinal crack after ZPMC had tested and accepted the welds in Bikepath Assembly

Description of Non-Conformance:

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Bike Path 008, this QA Inspector discovered the following issues:

- One Longitudinal linear crack in the weld measuring approximately 15mm in length.
- The weld is identified as BK004A6-008-080.
- The weld is partial joint penetration (PJP), joining the End Diaphragm plate identified as BKX11G to the Deck Plate identified as BKPL1A.
- This weld joint is designated as Non-Seismic performance critical (Non-SPCM) weld member.
- The crack is clearly marked on the material near the weld.
- The OBG Bike Path 008 is located in Bay #19.

The Notice of Witness Inspection Number (NWIT) is 006765, The indication is located within an area previously tested and accepted by ZPMC Quality Control (QC) personnel.

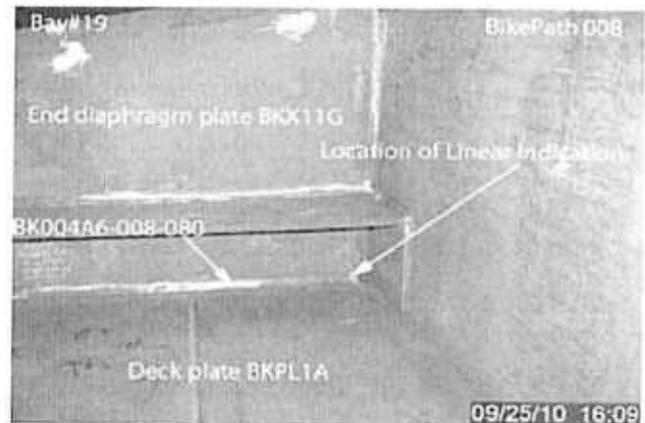
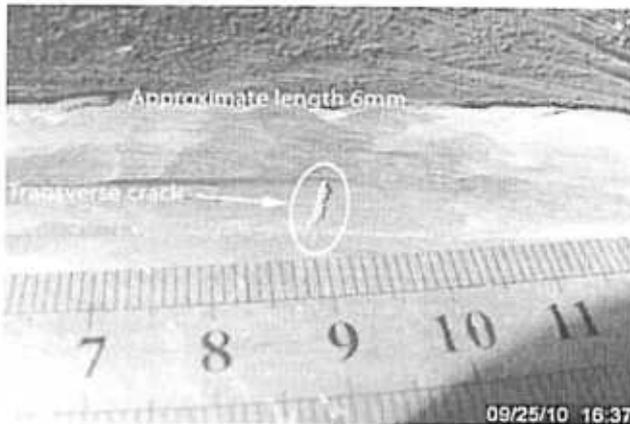
Quality Assurance (QA) Magnetic Particle Testing (MT) review of fillet welds located on OBG bike path BK004A-018, this QA Inspector discovered the following issues:

- One (1) transverse crack found on the weld measuring approximately 6mm in length.
- Y location of the indication is measured to be 2160mm.
- The crack is clearly marked on the weld joint.
- The weld is identified as: BK004A3-018-052.
- The Weld is a fillet weld joining the stringer plate (8C) to the deck plate of bike path.
- The member is located in bay 11.

The Notice of Witness Inspection Number (NWIT) is 06769. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



Applicable reference:

Special Provisions Section 8.3 – "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 (02) Section 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Nagalingam Pandaram Pillai & Umesh D. Gaikwad

Name of individual from Contractor notified: Peng Wen Jun and Zhao Xian He

Time and method of notification: 1715 hours, 09/25/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 1600 hours, 09/26/10, Email

QC Inspector's Name: Xu Tao and Weng Cheng Xin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

Bay Area Branch

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Vallejo, CA 94592-1133

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000858**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0820**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Bikepath Assembly BK004A5Procedural Procedural Description: Missed UT Indication by QC**Reference Description:** QA found 2 missed UT indications after ZPMC had tested and accepted these weld in bikepath assembly BK004A5**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on the Bike Path, these QA Inspectors discovered the following issues:

-Two (2) Class "A" indications measuring approximately 25-30mm in length.

-The welds are Complete Joint Penetration butt joints joining the stiffener to stiffener.

-The indication details are given as below:

1. The Indication rating is +3dB and length approximately 25mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 6mm.

The indication is located on the weld joint identified as BK004A5-001-112.

The "Y" location for this indication is approximately 50mm from top edge of the stiffener.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

2. The Indication rating is +8dB and length approximately 30mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 8mm.

The indication is located on the weld joint identified as BK004A5-008-122

The "Y" location for this indication approximately 50mm from deck plate.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

-The indications are clearly marked by the QA Inspectors near the weld.

- The OBG Bike Paths are located in the inside of fabrication bay 19.

The Notice of Witness Inspection Number (NWIT) is 006908. The indications are located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication as having a db rating of +10 and lower for weld thicknesses 8mm through 20mm."

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

Who discovered the problem: Vibin Kumar S. and Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jan

Time and method of notification: 1500 hours, 10/10/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo, Ching Chao

Time and method of notification: 1500 hours, 10/11/10, Email

QC Inspector's Name: Xu Tao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-16620R1 DATE 2010.10.27 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: BIKE PATH DRAWING NO.: BK004-008 CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SMAW BUTT Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE AMERICA EPOCH 4B 071565511

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T2 10mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
BK004A5-008-122	1R1	70				40								ACC.	100%

AFTER B-WR15857

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EXAMINED BY 主探 Xueharbin REVIEWED BY 审核 Lilong
 LEVEL - II SIGN / DATE 20/10.27 LEVEL - II SIGN / DATE 20/10.27

质量经理 / QCM Lv Hanhua 用户CUSTOMER _____
 签字 SIGN / 日期 DATE 20/10.27 签字 SIGN / 日期 DATE _____



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-16622R1 DATE 2010.10.27 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: BIKE PATH DRAWING NO.: BK004-001 CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范: AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002(Table 6.3) PROCEDURE NO. 程序编号: ZPQC-UT-01

WELDING PROCESS 焊接方法: SMAW JOINT TYPE 焊缝类型: BUTT CALIBRATION DUE DATE 仪器校正有效期: Dec. 28ST, 2010

EQUIPMENT 设备: UT SCOPE MANUFACTURER 制造商: AMERICA MODEL NO. 样式编号: EPOCH 4B SERIAL NO. 序列编号: 071565511

CALIBRATION BLOCK 试块: AWS IIV BLOCK TYPE II COUPLANT 耦合剂: C.M.C MATERIAL/THICKNESS 材料厚度: A709M-345T2 10mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y			
BK004A5-001-112	1R1	70				40									ACC.	100%

AFTER B-WR15855

BLANK

EXAMINED BY 主探: Xuehaoming REVIEWED BY 审核: Li Liming
 LEVEL - II SIGN N DATE 20/0.10.27 LEVEL - II SIGN + DATE 20/0.10.27

质量经理 / QCM: Lu Jianhua 用户 CUSTOMER: _____
 签字 SIGN / 日期 DATE: 20/0.10.27 签字 SIGN / 日期 DATE: _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000861

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 11-Oct-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0823

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

Reference Description: Lift 5 West Shaft: Missed MT Crack at Skin D and Transverse Plate

Description of Non-Conformance:

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located in West Tower lift 5 Grillage plate, WSD1-TL5-4B/F-3, this Quality Assurance (QA) Inspector discovered the following issues:

-One longitudinal toe crack measuring approximately 40mm in length.

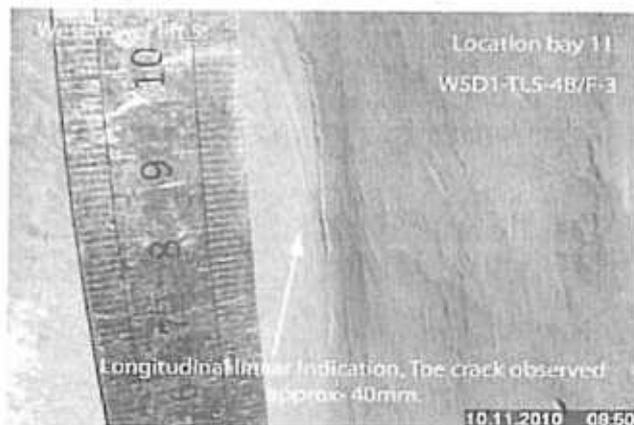
-The weld is identified as: WSD1-TL5-4B/F-3.

-The Weld is a Complete Joint Penetration (CJP) weld, joining the grillage plate to skin plate.

-The material is Non Seismic Performance Critical Member (NON SPCM)

-The member is located in Bay 11.

-The Notice of Witness Inspection Number (NWIT) is 06917. The indication is located on CJP weld area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% MT inspection of this weld. The attached photographs provide additional detail.



RVBWUZ!BTTVS BODF!...!OPO.DPOGPN BODF!SFOPSU

)!Dpojovf e!Qbhf !3!pg!3!*

Bqqrjdbcrf!sf gsf odf ;

Tqf djbrtQspwtjpot !Tf djpo!9/4!ó!! Rvbrjuz!Dpousprt)RD*!ti brtcf !ú f !sf tqotjcrjuz!pgú f !Dpousbdps!Bt !bl
n jojn vn -!ú f !Dpousbdps!ti brtcf ggsn !jot qf djpo!boe!ú f t joh!pgf bdi !x f ræ!kjoudqsjps!up!x f ræjoh-levsj oh!
x f ræjoh-!boe!bgf slx f ræjoh!bt !t qf djgf elj o!ú jt !t f djpo!boe!up!f ot vsf !ú b!n bú sjbrt!boe!x ps n bot i jq!dpogsn !
up!ú f !sf r vjsf n f out!pgú f !dpousbdlepdvn f out/n

BX T!E2/6!3113!t f djpo!7/37/3!! X f ret !ú bú bsf !t vck dúp!SU!ps!N U!j o!beejypo!up!wtj vbrjot qf djpo!ti brti bwf !
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Ujn f !boe!n f ú pe!pgopujgdbjpo; 2111!! st-!2102021-!Wf scbm

Obn f !pgDbrtsbot!Fohjof f slopujgfe; Tf bo!Fbhf o

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qvsqpt f !pgn bl joh!sf qbjs!ps!g!g!ps!qvsqpt f !sf dpn n f oebjpot!!Ti pvra!zpv!sf r vjsf !sf dpn n f oebjpot!
dpodf sojoh!sf qbjs!ps!sf n f ejbrtf ggsat !qrftf f !dpousbd!N b!f o!X bi cfi -!)929*!3; 3, 176; -!x i p!sf qsf t f out!ú f !
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RB!Jot qf dúps

Sf wjx fe!Cz; Ef w z-Kn

TNS

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Office of Structural Materials

Quality Assurance and Source Inspection



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(707) 649-5453
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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000862

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Oct-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0824

Type of problem:Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Lift 5 Grillage PlateProcedural Procedural Description:

Reference Description: Missed UT Indication: West Lift 5 Grillage Plate

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) verification of welds located on grillage plate of West Tower lift 5, this Quality Assurance (QA) Inspector discovered the following issues:

- One class "A" longitudinal indication measuring approximately 50mm in length.
- The depth of the indication is 57mm.
- The db rating is -2.
- The material thickness is 65mm.
- The weld is identified as: WSD1-TL5-4B/F-003.
- The Weld is a Complete Joint Penetration (CJP) with steel backing, T-joint, joining the grillage plate to the skin plate (skin "D").
- The "Y" location of the indication is 110mm from top side
- The indication is clearly marked on the component.
- The member is located in Bay 11.

The Notice of Witness Inspection Number (NWIT) is 06938. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

-Attached photographs provide additional location details.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6.6.2 "The Contractor shall be responsible for visual inspection and NDT described in 6.7 and necessary correction of all deficiencies in materials and workmanship in conformance with the requirements of Clause 3 and 6.26 and as specified elsewhere in the contract documents."

AWS D1.5-02 Table 6.3 Specifies a class A indication for material thicknesses between 60mm and 100mm as having a dbz rating of +1 and lower.

Who discovered the problem: Umesh D. Gaikwad

Name of individual from Contractor notified: Wang Jiang Hun

Time and method of notification: 1700, 10/13/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300, 10/14/10, Email

QC Inspector's Name: Deng Gai Sheng

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By: Ng, Michael

QA Inspector

Reviewed By: Devey, Jim

SMR



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-3371R1 DATE 2010.10.22 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: FIFTH LIFTING TOWER(W) DRAWING NO.: WSD1-TL5-4B/F CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SMAW CORNER-JOINT Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE OLYMPUS EPOCH-4B 081610708

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-HPS-485WT2-Z 65/90mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75"×0.625"	AMERICA	45°	2.25MHz	0.75"×0.625"
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
WSD1-TL5-4B/F-3	1R1	70					45								ACC.	100%
		45					39								ACC.	100%

AFTER T-WR3727

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EXAMINED BY 主探
Dai Gengsheng
 LEVEL - II SIGN / DATE 20/10.22

REVIEWED BY 审核
Lilimin y
 LEVEL - II SIGN / DATE 20/10.22

质量经理 / QCM
W Jianhua
 签字 SIGN / 日期 DATE 20/10.22

用户 CUSTOMER
 签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection

Contract #: 04-0120F4

Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000866

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 17-Oct-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0828

Type of problem:

Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG Segment 12AE DPProcedural Procedural Description: Missed UT Indication by QC

Reference Description: QA found a missed UT indication after ZPMC had tested and accepted these weld in
 Segment 12AE Deck Panel Diaphragm

Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) verification of weld located on OBG Segment 12AE, this QA Inspector discovered the following issue:

- One Class "A" indication measuring approximately 20mm in length.
- The Indication rating is -9dB and length approximately 20mm.
- The thickness of the plate is 14mm and depth of the indication approximately 5mm.
- The indication is located on the weld joint identified as SEG3001J-002.
- The "Y" location for this indication is approximately 280mm from deck panel.
- The weld is a Complete Joint Penetration (CJP) butt joint-joining deck panel diaphragm (X3021E) to deck panel diaphragm (X3021G).
- The indication is clearly marked by QA on/near the weld.
- OBG Segment 12AE is located in outside yard (west side of Blast Shop 1).

The Notice of Witness Inspection Number (NWIT) is 006956. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Applicable reference:

-AWS D1.5-2002, Section 6, Table 6.3. Specifies a class 'A' indication as having a db rating of +10 and lower for weld thicknesses 8mm through 20mm.

-Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

Who discovered the problem: Vibin Kumar S

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Wang Heng
Time and method of notification: 15:00 hours 10/17/10 Verbal
Name of Caltrans Engineer notified: Laraine Woo, Ching Chao
Time and method of notification: 16:00 hours 10/18/10 Email
QC Inspector's Name: Li Ping
Was QC Inspector aware of the problem: Yes No
Contractor's proposal to correct the problem:
N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-16173R1 DATE 2010.10.27 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: 12AE DECK PLATE DRAWING NO.: SEG3001J CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 FCAW BUTT Dec. 28th, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE AMERICA EPOCH 4B 071565511

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-345T2-X 14mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									a	b	c	d	Length 长度		
SEG3001J-002	1R1	70				40								ACC.	100%

AFTER B-WR16070

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EXAMINED BY 主探 Xue Maibing REVIEWED BY 审核 Liu Liming
 LEVEL - II SIGN / DATE 20/10/27 LEVEL - II SIGN / DATE 20/10/27

质量经理 / QCM Lu Jianhua 用户 CUSTOMER _____
 签字 SIGN / 日期 DATE 20/10/27 签字 SIGN / 日期 DATE _____

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: xx.25B

Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, China

Report No: NCR-000868

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Oct-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0830

Type of problem:

Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:

Bridge No: 34-0006

Component: SA3361-001 Lift 14 East Anch Vertical Plate

Reference Description: Missed UT Indication Discovered by Quality Assurance

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on OBG Sub Assembly SA3361-001 this Quality Assurance Inspector (QA) discovered the following issues:

- One ultrasonic longitudinal linear indication measuring approximately 15mm in length on a 40mm thick plate.
- The weld is identified as: SA3361-001-001.
- Indication rating is 0 dbs.
- Depth of indication is 12mm
- Y location is approximately 1420mm from the edge of the plate.
- The weld is a Complete Joint Penetration (CJP) joint, joining web plate X4757A to web plate X4757B.
- The OBG Sub assembly SA3161-001 is located in Bay-4-west side.

The NDT Inspection Notification Sheet is Document No. 07013. The indication is located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. According to the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Please reference the following attached pictures:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Table 6.3 – “Specifies a Class A indication having a dbS rating of 4 and lower for material thicknesses between 38mm and 60mm.”

Who discovered the problem: Rene Hernandez

Name of individual from Contractor notified: Wang Wen Bin

Time and method of notification: 1430 hours, 10/18/10, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 10:00 hours, 10/20/10, Email

QC Inspector's Name: Chen Xi

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Devey,Jim	SMR
Reviewed By:	Wahbeh,Mazen	SMR



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-17146R1 DATE 2010.10.24 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: 部件名称	PLATE PANEL SPLICE	DRAWING NO.: 图号	SA3361	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号
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REFERENCING CODE 参考规范 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3)	PROCEDURE NO. 程序编号 ZPQC-UT-01
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WELDING PROCESS 焊接方法 FCAW	JOINT TYPE 焊缝类型 BUTT	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010
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EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 OLYMPUS	MODEL NO. 样式编号 EPOCH 4B	SERIAL NO. 序列编号 081610708
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CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345F2 40mm
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TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625 in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
SA3361-001-001	1R1	70					43								ACC.	100%

AFTER B-WR16066

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EXAMINED BY 主探 <i>Dai Geny sheng</i> LEVEL - II SIGN / DATE 20/10.24 质量经理 / QCM <i>Lu Jianhua</i> 签字 SIGN / 日期 DATE 20/10.24	REVIEWED BY 审核 <i>L. King</i> LEVEL - II SIGN / DATE 20/10.24 用户 CUSTOMER 签字 SIGN / 日期 DATE
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DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave. St. 150

Vallejo, CA 94592-1133

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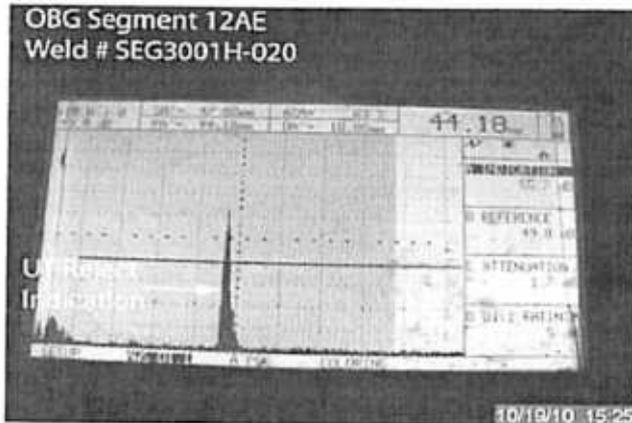
Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000869**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 19-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0831**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Segment 12AE Floorbeam JointProcedural Procedural Description: Missed UT Indication by QC**Reference Description:** QA found a missed UT indication after ZPMC had tested and accepted the weld in Segment 12AE Floorbeam Joint**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) verification of weld located on Segment 12AE, this QA Inspector discovered the following issue:

- One (1) Class "A" indication measuring approximately 25mm in length.
- The Indication rating is +5dB and length approximately 25mm.
- The thickness of the plate is 30mm and depth of the indication is approximately 15mm.
- The indication is located on the weld joint identified as SEG3001H-020.
- The "Y" location for this indication is approximately 500mm from Bottom plate.
- The weld is a Complete Joint Penetration (CJP) butt joint, joining Floor Beam FB3033A (X3009A) to Floor Beam FB03031A (X3003E).
- The indication is clearly marked by QA on/near the weld.
- This weld is identified as Seismic Performance Critical Member (SPCM).
- OBG Segment 12AE is located at the outside yard west side of Blast Shop 1.
- The Notice of Witness Inspection Number (NWIT) is 006956. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

-AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication as having a dBs rating of +8 and lower for weld thicknesses 21mm through 38mm."

-Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

Who discovered the problem: Vikram Singh

Name of individual from Contractor notified: Wang Heng

Time and method of notification: 1530 hours, 10/19/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo, Ching Chao

Time and method of notification: 1500 hours, 10/20/10, Email

QC Inspector's Name: Wang Wei Ming

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-16232R1 DATE 2010.10.27 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: 12AE FLOOR BEAM FL2 DRAWING NO.: SEG3001H CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3) PROCEDURE NO. 程序编号 ZPQC-UT-01

WELDING PROCESS 焊接方法 SMAW JOINT TYPE 焊缝类型 BUTT CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 AMERICA MODEL NO. 样式编号 EPOCH 4B SERIAL NO. 序列编号 071565511

CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II COUPLANT 耦合剂 C.M.C MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 30mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625 in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	-Length 长度			Sound Path 声程
SEG3001H-020	1R1	70				43									ACC.	100%

AFTER B-WR16105

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EXAMINED BY 主探 <i>Xuehan</i> LEVEL - II SIGN DATE 20/10/27	REVIEWED BY 审核 <i>Xuehan</i> LEVEL - II SIGN DATE 20/10/27
质量经理 / QCM <i>Li Hanhua</i> 签字 SIGN / 日期 DATE 20/10/27	用户 CUSTOMER 签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000864**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0820**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 10-Oct-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on the Bike Path, these QA Inspectors discovered the following issues:

- Two (2) Class "A" indications measuring approximately 25-30mm in length.
- The welds are Complete Joint Penetration butt joints joining the stiffener to stiffener.

-The indication details are given as below:

1. The Indication rating is +3dB and length approximately 25mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 6mm.

The indication is located on the weld joint identified as BK004A5-001-112.

The "Y" location for this indication is approximately 50mm from top edge of the stiffener.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

2. The Indication rating is +8dB and length approximately 30mm.

The nominal thickness of the plate is 10mm and depth of the indication approximately 8mm.

The indication is located on the weld joint identified as BK004A5-008-122

The "Y" location for this indication approximately 50mm from deck plate.

The weld is a Complete Joint Penetration (CJP) butt weld joint splice of stiffener (BKX7) to stiffener (BKX7).

-The indications are clearly marked by the QA Inspectors near the weld.

- The OBG Bike Paths are located in the inside of fabrication bay 19.

The Notice of Witness Inspection Number (NWIT) is 006908. The indications are located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

